

IN THE CLAIMS

The following is a complete listing of the claims in the application, including the status of all claims and current amendments:

1-17 (Canceled).

18 (New). A non-energetic plasticizer suitable for replacing a generally larger amount of high energy energetic plasticizers, including dinitrotoluene, for plasticizing high nitrogen nitrocellulose enabling a dinitrotoluene-free single based propellant formulation, said plasticizer consisting of material selected from citrate, adipate compounds and combinations thereof.

19 (New). A non-energetic plasticizer suitable for replacing a generally larger amount of high energy energetic plasticizers, including dinitrotoluene, for plasticizing high nitrogen nitrocellulose enabling a dinitrotoluene-free single based propellant formulation; said plasticizer consisting of material selected from acetyltriethyl citrate, acetyltri-n-butyl citrate, triethyl citrate, tributyl citrate, diisobutyl adipate, diisoctyl adipate and mixtures thereof.

20 (New). A plasticizer as in claim 18 wherein said high energetic plasticizer replaced is dinitrotoluene.

21 (New). A plasticizer as in claim 19 wherein said high energetic plasticizer replaced is dinitrotoluene.

22 (New) A plasticizer as in claim 19 comprising a citrate.

23(New). A plasticizer as in claim 22 wherein the citrate is acetyltriethyl citrate.

24(New). A plasticizer as in claim 22 wherein the citrate is acetyltri-n-butyl citrate.

25(New). A plasticizer as in claim 19 comprising an adipate.

26(New). A plasticizer as in claim 25 wherein the adipate is diisobutyl adipate.

27(New). A single base propellant free of high energy plasticizers comprising by weight:

- (a) from about 93 to about 97% high nitrogen nitrocellulose;
- (b) from about 2-5% of a non-energetic plasticizer as defined in claim 19; and
- (c) about 2% dibutylphthalate.

28(New). A dinitrotoluene and dibutyl phthalate-free, single base propellant comprising by weight:

- (a) from about 88% to about 90% high nitrogen (about 13.2%N) nitrocellulose; and
- (b) from about 4% to about 10% of a non-energetic citrate plasticizer selected from acetyltriethyl citrate, acetyltri-n-butyl citrate, triethyl citrate, tributyl citrate and mixtures thereof.

29(New). A propellant as in claim 28 further comprising about 1% by weight ethyl centralite.

30(New). A propellant as in claim 28 further comprising up to about 1% by weight of K₂SO₄ or KNO₃.

31 (New) . A propellant as in claim 29 further comprising up to about 1% by weight of K₂SO₄ or KNO₃.

32 (New) . A propellant as in claim 28 wherein the citrate is acetyltriethyl citrate.

33 (New) . A propellant as in claim 28 wherein the non-energetic plasticizer is present in an amount of about 10% by weight and the nitrocellulose is present in an amount of about 88% by weight.

34 (New) . A single base propellant as in claim 27 wherein said nitrocellulose is about 13.2%N.